Fall 2019 Levee Maintenance Deficiency Summary Report

Overall LMA & Unit Ratings, including USACE Erosion Survey

Sacramento River Basin

NA0021 Yolo County Department of Natural	Overall LMA Rating	Total LMA Miles							
Resources	U	0.59							
Rated Item		Maintena	nce Deficiency		Enforc	Enforcement		Design & System Obsolescence	
Rated item	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles	
Earthen Levee									
Vegetation		0.08	0.32	54.53%					
Encroachments	0.01		0.01	1.70%	0.02				
Animal Control	0.02	0.01	0.06	10.22%					
Supplemental									
DRAFT DWR UCIP Field Study					0.01				
LMA Totals:	0.03	0.09	0.39	66.46%	0.03	0.00	0.00	0.00	
Unit No. 01 Right Bank Cache Creek RB Overall Unit Total Unit									
5	Rating	Miles							
NA0021									
NA0021	Rating	Miles 0.59	nce Deficiency		Enforc	ement	Design & Obsole		
	Rating	Miles 0.59	nce Deficiency M + 4U Miles	Threshold %	Enforce M Miles		Obsole		
NA0021	Rating U	Miles 0.59 Maintena	, ,	Threshold %			Obsole	scénce	
NA0021 Rated Item	Rating U	Miles 0.59 Maintena	, ,	Threshold %			Obsole	scénce	
NA0021 Rated Item Earthen Levee	Rating U	Miles 0.59 Maintena U Miles	M + 4U Miles				Obsole	scénce	
NA0021 Rated Item Earthen Levee Vegetation	Rating U M Miles	Miles 0.59 Maintena U Miles	M + 4U Miles 0.32	54.53%	M Miles		Obsole	scénce	
Rated Item Earthen Levee Vegetation Encroachments	M Miles	Miles 0.59 Maintena U Miles 0.08	0.32 0.01	54.53% 1.70%	M Miles		Obsole	scénce	
Rated Item Earthen Levee Vegetation Encroachments Animal Control	M Miles	Miles 0.59 Maintena U Miles 0.08	0.32 0.01	54.53% 1.70%	M Miles		Obsole	scénce	

Winter **

Flood Control Project Maintenance Levee Inspections

LMA District Cover Sheet

Fall 2019 Levee Inspection Results

Yolo County Department of Natural Resources

Spring

Summer **

	(Maron May)	(Gario 7 lagact)	(Coptombol Hovelbol)	(Bosonibor Tobradiy)							
† Overall LMA Rating (Fall Only)			U								
** Non-receipt of Summer or Winter Inspection Reports may effect overall annual rating.											
	SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.										
FALL INSPECTIONS: The overall maintena within the attached u			tion and maintenance de ended to be an indiction o								
Comments											

Unit Cover Sheet

Fall 2019 Levee Inspection Results

Yolo County Department of Natural Resources

Waterway	Bank	Unit Miles
Unit No. 01 Right Bank Cache Creek	Right	0.59

	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			U	
Date of Inspection	3/29/2019 - 3/29/2019		10/25/2019 - 10/25/2019	
DWR Inspector	Zach Jojola		Zach Jojola	
Accompanied By	Casey Leibler o County Department of Natural Resource		Casey Leibler o County Department of Natural Resource	
	Thomas Engler MBK		Thomas Engler MBK	

Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

http://cdec.water.ca.gov/lma.html

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

Levee Inspection Report By Mile - Fall 2019

Yolo County Department of Natural Resources

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Right Bank Cache Creek	Right	0.59	10/25/2019 10/25/2019	Zach Jojola

LM Start		Rating **	Α	Issue No.		5	
LM End		Issue Type +	Ma	Location *		N/A	
Category	Earthen L	Levee GPS Latitude/Longitude			e/Longitude		
Calegory				Start		End	
Item		s & Maintena	nce		0		0
пеш	Manuals				0		0
DWR ID	DWR_NA0	021_01_s _ 201	2_5				
		Comn	nent Cod	de			
		Inspecto	or Comm	nent			
Yolo Coun	ty has cop	ies of the O&l	M manua	al.			

No Photos

Rating ** Issue No. Α 11 LM Start Issue Type + Ма Location * N/A LM End Earthen Levee GPS Latitude/Longitude Category Start End Emergency Supplies & Item Equipment DWR_NA0021_01_s _ 2018_11 DWR ID Comment Code

No Photos

Inspector Comment

Yolo County OES maintains a stockpile of flood response material.

LM Start		Rating **	Α	Issue No.		12		
LM End		Issue Type +	Ma	Location *		N/A		
Category Earthen Levee			GPS Latitude/Longitude					
Calegory				Start		End		
Item	Flood Pre	paredness &	Training		0		0	
item					0		0	
DWR ID	DWR_NA0	021_01_s _ 201	2_12					
		Comn	nent Cod	le				
	Inspector Comment							
Yolo Coun	ty OES ha	s a written res	sponse p	lan and res	pon	se training.		

No Photos

* Location
LS: Land Side N/A: Not Applicable
WS: Water Side

CR : Crown

able A : Acceptable
M : Minimally Acceptable
U : Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type
Ma: Maintenance Deficiency
Ob: Design & System Obsolescence
En: Enforcement

Levee Inspection Report By Mile - Fall 2019

Yolo County Department of Natural Resources

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Right Bank Cache Creek	Right	0.59	10/25/2019 10/25/2019	Zach Jojola

LM Start	0.03	Rating **	U	Issue No.		23	
LM End	0.07	Issue Type +	Ма	Location *	WS		
Catagonia Earthen Levee				GPS La	titud	le/Longitude	
Category				Start		End	
Item	Vegetatio	n		38.7208	92 °	38.721020°	
item				-121.8104	21 °	-121.809792°	
DWR ID	ID DWR_NA0021_01_s _ 2017_23						
	Comment Code						

 $\ensuremath{\mathsf{V2}}$: Remove the wild growth other than native grasses from the levee slopes.

Inspector Comment

There is thick vegetation on waterside slope blocking visibility.

LM Start	0.03	Rating **	U	Issue No.	23 (cont)
LM End	0.07	Issue Type +	Ma	Location *	WS



Wild vegetation on the waterside levee slope, Spring 2018.

Photo 2 of 2: FA_2019_NA0021_351_23_20190829_00017.jpg



Wild vegetation on waterside levee slope, Spring 2017.

LM Start	0.03	Rating **	М	Issue No.		15		
LM End	0.03	Issue Type +	Ма	Location *	WS			
Category	evee	GPS La	atitud	e/Longitude				
Category				Start		End		
Item	Encroachi	ments		38.7208	95°	38.720895°		
item				-121.8104	08°	-121.810408°		
DWR ID	DWR_NA0	021_01_f _ 201	5_15					
		Comn	nent Cod	de				
DE : Debri	S							
		Inspecto	or Comm	nent				
Concrete p	ipes are lo	ocated on the	watersid	le slope.				



View of the debris on the waterward side of the levee. Fall 2015.

Levee Inspection Report By Mile - Fall 2019

Yolo County Department of Natural Resources

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Right Bank Cache Creek	Right	0.59	10/25/2019 10/25/2019	Zach Jojola

LM Start	0.09	Rating **	U	Issue No.	No. 6				
LM End	0.13	Issue Type +	Ма	Location *	WS				
Category Earthen Levee				GPS Latitude/Longitude					
Calegory				Start Er		End			
Item	Vegetatio	getation		38.7210	86 °	38.721222°			
item						-121.808650 °			
DWR ID DWR_NA0021_01_f _ 2018_6									

Comment Code

V2 : Remove the wild growth other than native grasses from the levee slopes.

Inspector Comment

Photo 1 of 1: FA_2019_NA0021_351_6_20190829_00002.jpg



View of the vegetation on the waterside slope. Fall 2018.

LM Start	0.14	Rating **	A/W	Issue No.		9
LM End	0.14	Issue Type +	Ob	Location *	CR	
Category	Earthen L	evee		GPS La	atitud	le/Longitude
Calegory				Start	Start End	
Item	Cracking			38.7212	60°	38.721260 °
пеш				-121.8084	96°	-121.808496°
DWR ID	DWR_NA0	021_01_f _ 201	8_9			

Comment Code

CR1: Monitor and have inspected by geotechnical engineer.

Inspector Comment

There is longitudinal cracking on the crown and waterside slope. There is potential for sloughing within the crown. Recommend monitoring.

Photo 1 of 1 : FA_2019_NA0021_351_9_20190829_00006.jpg



View of the longitudinal cracking on the crown and waterside slope. Fall 2018.

LM Start	0.19	Rating **	U	Issue No.		16		
LM End	0.19	Issue Type +	Ма	Location *	LS			
Category	Earthen L	evee		GPS Latitude/Longitu				
Category				Start	End			
Item	Animal Control			38.7215	36°	38.721536°		
пеш				-121.8077	11 °	-121.807711 °		
DWR ID DWR_NA0021_01_s _ 2015_16								
	Comment Code							

A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

Inspector Comment

Photo 1 of 3: FA_2019_NA0021_351_16_20190829_00008.jpg



View of rodent hole on the landside slope next to power pole. Spring 2019.

* Location

LS: Land Side N/A: Not Applicable WS: Water Side CR: Crown

** Rating

A: Acceptable N: Not Inspected/Rated M: Maintenance Deficiency

M: Minimally Acceptable C: Corrected Ob: Design & System Obsolescence

U: Unacceptable AW: Acceptable but Monitor & Maintain

** Rating

A: Acceptable M: N: Not Inspected/Rated M: Maintenance Deficiency Ob: Design & System Obsolescence

En: Enforcement

Levee Inspection Report By Mile - Fall 2019

Yolo County Department of Natural Resources

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Right Bank Cache Creek	Right	0.59	10/25/2019 10/25/2019	Zach Jojola

LM Start	0.19	Rating **	U	Issue No.		16 (cont)				
LM End	0.19	Issue Type +	Ma	Location *		Location *		Location *		LS
Category Earthen Levee				GPS Latitude/Longitude						
Calegory				Start End						
Item	Animal Control			38.721536 °		38.721536°				
item						-121.807711 °				
DWR ID	DWR_NA0	021_01_s _ 201	5_16							
Comment Code										
A3 : No rodents visible, but rodent burrows visible; need to backfill and										

compact or grout burrows.

Inspector Comment

LM Start	0.19	Rating **	U	Issue No.	16 (cont)
LM End	0.19	Issue Type +	Ma	Location *	LS



View of the rodent holes on the landward side of the levee looking downstream. Spring 2016.

Photo 3 of 3: FA_2019_NA0021_351_16_20190829_00010.jpg



View of rodent holes on landside slope. Fall 2016.

LM Start	0.20	Rating **	М	Issue No.	7			
LM End	0.20	Issue Type +	Ma	Location *	LS			
Category	Earthen L	evee	GPS Latitude/Longitude					
Category			Start End					
Item	Animal Control			38.7216	83°	38.721683°		
пеш				-121.8075	32 °	-121.807532 °		
DWR ID DWR_NA0021_01_s _ 2016_7								
	Comment Code							

A3: No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

Inspector Comment



Perspective view of the rodent hole on the landward side of the levee looking downstream. Spring 2016.

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement

Levee Inspection Report By Mile - Fall 2019

Yolo County Department of Natural Resources

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Right Bank Cache Creek	Right	0.59	10/25/2019 10/25/2019	Zach Jojola

. 20 Is	ssue Type +	Ма	Location *		LS	
hen Lev	ree		0001			
			GPS Latitude/Longitude			
			Start E		End	
Animal Control			38.72168	3°	38.721683°	
			-121.80753	32 °	-121.807532 °	
DWR ID DWR_NA0021_01_s _ 2016_7						
Comment Code						
		2_NA0021_01_s _ 201	R_NA0021_01_s _ 2016_7	nal Control 38.72168 -121.80753 2_NA0021_01_s _ 2016_7	nal Control 38.721683 ° -121.807532 ° 8_NA0021_01_s _ 2016_7	

A3: No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

Inspector Comment





Animal hole is close to the shoulder of the levee. Spring 2016.

LM Start	0.22	Rating **	М	Issue No.		8		
LM End	0.22	Issue Type +	Ma	Location *	LS			
Category Earthen Levee				GPS Latitude/Longitude				
Calegory				Start End				
Item	Animal Control			38.7218	76°	38.721876°		
item				-121.8073	93 °	-121.807393°		
DWR ID DWR_NA0021_01_s _ 2016_8								
Comment Code								

A3: No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

Inspector Comment



View of the rodent holes on the landward side of the levee looking downstream. Spring 2016.

Levee Inspection Report By Mile - Fall 2019

Yolo County Department of Natural Resources

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Right Bank Cache Creek	Right	0.59	10/25/2019 10/25/2019	Zach Jojola

LM Start	0.24	Rating **	М	Issue No.		24	
LM End	0.24	Issue Type +	En	Location *			
Category	Supplemental			GPS Latitude/Longitude			
Calegory			Start		End		
Item	DRAFT DWR UCIP Field Study			38.7221	62°	38.722162°	
пеш				-121.807223 °		-121.807223°	
DWR ID	19554						

Inspector Comment

Comment Code

DS ID:19554 FS_ID:39855 EP_NO: 6790

Repair Type: Non-Urgent Crossing Status: Indicator Found

UCIP Comments: Need to contact owner to determine if crossing is still active and to determine last inspection date. Will need copy of letter

showing crossings passed inspection.

FIELD_STRUCT_DESC: 6-inch steel natural gas pipeline through the levee, 4 feet below the crown. Pipe extends from borrow area and under the channel. Bleeder valve on the waterside (WS) bank. Service vault located on the landside (LS) next to access gate. Paved access ramp on the LS slope. (Plans to lower a 6-inch high-pressure gas main crossing Cache Creek authorized under Permit No. 6790, 1969 - Pacific Gas and Electric Company [PG&E]). [Additional Reference(s): DWR Levee Log, 2004]. FS Date: 4/16/2013

LM Start	0.24	Rating **	М	Issue No.	24 (cont)
LM End	0.24	Issue Type +	En	Location *	



View of landward side near access gate. Gas line marker located on between trees. Line runs parallel to access roadway and through levee.

Photo 2 of 3: UCIP_FA_2019_39855_69554.jpg



Service vault located on landward toe near gate access gate.

Levee Inspection Report By Mile - Fall 2019

Yolo County Department of Natural Resources

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Right Bank Cache Creek	Right	0.59	10/25/2019 10/25/2019	Zach Jojola

LM Start	0.24	Rating **	М	Issue No.		24 (cont)
LM End	0.24	Issue Type +	En	Location *		
Category			GPS Latitude/Longitude			
Category	Category			Start		End
Item	DRAFT D	DRAFT DWR UCIP Field			62 °	38.722162°
пеш	Study			-121.807223°		-121.807223 °
DWR ID	19554					·

Comment Code

Inspector Comment

DS ID:19554 FS_ID:39855 EP_NO: 6790

Repair Type: Non-Urgent Crossing Status: Indicator Found

UCIP Comments: Need to contact owner to determine if crossing is still active and to determine last inspection date. Will need copy of letter

showing crossings passed inspection.

FIELD_STRUCT_DESC: 6-inch steel natural gas pipeline through the levee, 4 feet below the crown. Pipe extends from borrow area and under the channel. Bleeder valve on the waterside (WS) bank. Service vault located on the landside (LS) next to access gate. Paved access ramp on the LS slope. (Plans to lower a 6-inch high-pressure gas main crossing Cache Creek authorized under Permit No. 6790, 1969 - Pacific Gas and Electric Company [PG&E]). [Additional Reference(s): DWR

Levee Log, 2004]. FS Date: 4/16/2013



View of gas line marker located on levee crown.

LM Start	0.27	Rating **	М	Issue No.	18		
LM End	0.27	Issue Type +	En	Location *	LS		
Category	Earthen Levee			GPS Latitude/Longitude			
Calegory	Dategory			Start		End	
Itom	ltem Encroachments			38.722615°		38.722615°	
пеш				-121.806952 °		-121.806952 °	
DWR ID	DWR ID DWR_NA0021_01_s _ 2015_18						
Comment Code							
EQ : Equipment							

Inspector Comment

Photo 1 of 2 : FA_2019_NA0021_351_18_20190829_00011.jpg

Photo of equipment near LS toe of the levee. Fall inspection 10/07/2016.

* Location + Issue Type Ma : Maintenance Deficiency LS: Land Side N/A: Not Applicable : Acceptable N: Not Inspected/Rated WS: Water Side Minimally Acceptable C : Corrected Ob : Design & System Obsolescence CR : Crown U : Unacceptable A/W : Acceptable but Monitor & Maintain En: Enforcement

Levee Inspection Report By Mile - Fall 2019

Yolo County Department of Natural Resources

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Right Bank Cache Creek	Right	0.59	10/25/2019 10/25/2019	Zach Jojola

LM Start	0.27	Rating **	М	Issue No.		18 (cont)	
LM End	0.27	Issue Type +	En	Location *		LS	
Cotogony	Earthen L	evee		GPS La	atitud	e/Longitude	
Category				Start		End	
Item	Encroachments			38.7226	15°	38.722615°	
item				-121.806952 °		-121.806952°	
DWR ID DWR_NA0021_01_s _ 2015_18							
Comment Code							
EQ : Equip	ment						
Inspector Comment							

Photo 2 of 2: FA_2019_NA0021_351_18_20190829_00012.jpg



View of equipment on the landward side of the levee looking downstream. Spring 2015.

LM Start	0.27	Rating **	М	Issue No.		22	
LM End	0.27	Issue Type +	En	Location *		WS	
Category Earthen Levee			GPS Latitude/Longitude				
Calegory				Start		End	
Item	Encroachments			38.722620°		38.722620°	
item				-121.806958 °		-121.806958°	
DWR ID DWR_NA0021_01_f _ 2015_22							
		Comn	nent Cod	de			
RA: Ramp)						
Inspector Comment							
There is an unauthorized vehicle ramp by owner on the waterside slope.							

LM Start	0.27	Rating **	М	Issue No.	22 (cont)
LM End	0.27	Issue Type +	En	Location *	WS

Photo 1 of 3: FA_2019_NA0021_351_22_20190829_00013.jpg



Perspective view of the trail on the waterward side of the levee looking downstream. Fall 2015.

Photo 2 of 3: FA_2019_NA0021_351_22_20190829_00014.jpg



View of the trail on the waterward side of the levee. Fall 2015.

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement

Levee Inspection Report By Mile - Fall 2019

Yolo County Department of Natural Resources

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Right Bank Cache Creek	Right	0.59	10/25/2019 10/25/2019	Zach Jojola

LM Start	0.27	Rating **	М	Issue No.	22 (cont)		
LM End	0.27	Issue Type +	En	Location *	WS		
Category Earthen Levee				GPS Latitude/Longitude			
Calegory				Start		End	
Encroachments				38.722620°		38.722620 °	
пеш			-121.806958 °		-121.806958°		
DWR ID	DWR_NA0021_01_f _ 2015_22						
Comment Code							

RA: Ramp

Inspector Comment

There is an unauthorized vehicle ramp by owner on the waterside slope.



The trail seems to be an access point that leads down to Cache Creek. Fall 2015.

LM Start	0.27	Rating **	A/W	Issue No.		14	
LM End	0.27	Issue Type +	Ma	Location *	WS		
Category Earthen Levee			GPS Latitude/Longitude				
Category				Start		End	
ltem Vegetation			38.7226	33°	38.722633°		
nem				-121.80693	38°	-121.806938 °	
DWR ID	DWR ID DWR_NA0021_01_s _ 2012_14						
Comment Code							

V4: Elderberries are blocking visibility and flood fight capability.

Inspector Comment

No Photos

LM Start	0.40	Rating **	Α	Issue No.	2		
LM End	0.40	Issue Type +	Ma	Location *	WS		
Category Earthen Levee				GPS Latitude/Longitude			
Category				Start		End	
Seepage / Sandboils				38.724387°		38.724387 °	
пеш				-121.806584°		-121.806584°	
DWR ID	WR ID DWR_NA0021_01_f _ 2019_2						
Comment Code							

Inspector Comment

Historic sandboil site. The landowner moved material from the emergency seepage berm placed during 2019 from the waterside slope onto the landside slope. Recommend monitoring during high water.

Photo 1 of 1: FA_2019_NA0021_351_2_20191028_00021.jpg



View of sandboil site and seepage berm. Fall 2019.

* Location LS: Land Side N/A: Not Applicable

WS: Water Side CR : Crown

: Acceptable : Minimally Acceptable U : Unacceptable

N : Not Inspected/Rated

C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiency Ob : Design & System Obsolescence

En: Enforcement

Levee Inspection Report By Mile - Fall 2019

Yolo County Department of Natural Resources

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Right Bank Cache Creek	Right	0.59	10/25/2019 10/25/2019	Zach Jojola

LM Start	0.45	Rating **	С	Issue No.		3	
LM End	0.45	Issue Type +	Ma	Location *	LS		
Category	Earthen Levee			GPS Latitude/Longitude			
Calegory			Start		End		
Item	Animal Control			38.725115°		38.725115 °	
пеш			-121.806527 °		-121.806527°		
DWR ID	DWR_NA0021_01_f _ 2017_3						
Comment Code							
A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.							
Inspector Comment							

No Photos

** Rating
LS: Land Side N/A: Not Applicable WS: Water Side CR: Crown

** Rating
A: Acceptable N: Not Inspected/Rated M: Minimally Acceptable C: Corrected AW: Acceptable but Monitor & Maintain

** Rating
A: Asceptable N: Not Inspected/Rated M: Maintenance Deficiency
Ob: Design & System Obsolescence En: Enforcement